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<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>		Docket Number (Optional) 251812-1220
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]  on _____  Signature _____  Typed or printed name _____	Application Number 10/708,027	Filed February 3, 2004
	First Named Inventor Yung-Chieh Lo	
	Art Unit 2465	Examiner Houshmand, Hooman

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

- applicant/inventor.
- assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)
- attorney or agent of record.  
Registration number 38,962.
- attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_.

/Daniel R. McClure/

\_\_\_\_\_  
Signature

Daniel R. McClure

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Typed or printed name

770-933-9500

\_\_\_\_\_  
Telephone number

April 15, 2010

\_\_\_\_\_  
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.

<input checked="" type="checkbox"/>	*Total of <u>1</u> forms are submitted.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Application of:

Lo, et al.

Confirmation No.: 2026

Serial No.: 10/708,027

Group Art Unit: 2419

Filed: February 3, 2004

Examiner: Houshmand, Hooman

TKHR Ref: 251812-1220

Client Ref: 92A-092US

Title: Method for Fragmenting an Incoming  
Packet into a First Outgoing Packet and  
a Second Outgoing Packet

**REMARKS IN SUPPORT OF PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Mail Stop Appeal  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Applicants submit the following remarks in support of a Request for a Pre-Appeal Brief Conference.

Claims 1-16 and 20-26 are currently pending and subject to a final rejection based on the FINAL Office Action mailed January 15, 2010. Of relevance here, the FINAL Office Action rejected independent claims 1, 9, and 20 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Kitada* (U.S. Pub. No. 2003/0037163), in view of Applicants' admitted prior art (AAPA), further in view of *McCullough* (U.S. Pub. No. 2002/0010866). Applicants respectfully disagree and submit the following remarks for consideration. Applicants respectfully submit that errors in the rejection are evident for various claims. However, for purposes of conciseness, Applicants discuss in depth the errors in representative claims among the rejected claims – specifically, claims 1 and 20.

Claim 1 defines the feature “wherein the remaining portion corresponds to a majority of the payload of the incoming packet.” Applicants respectfully submit that

claim 1 defines over the prior art for at least the reason that the cited art fails to disclose, teach, or suggest this feature. In rejecting claim 1 based on the combination of *Kitada*, *AAPA*, and *McCullough*, the Office Action concedes that *Kitada* and *AAPA* fail to disclose the feature “wherein the remaining portion corresponds to a majority of the payload of the incoming packet.” (FINAL Office Action mailed January 15, 2010, page 4). Instead, the Office Action contends that the *McCullough* reference discloses this feature. In doing so, the Office Action refers to various passages within the *McCullough* reference, including paragraphs [0078] and [0079]. Based on these passages, the Office Action asserts the following:

*“The bundle manager fragments a packet by comparing the size of the packet with the transmission unit MTU, which for underlying PPP links is 1500 bytes, [0079] In the gateway device, the fragment size is set at configuration time to 50% of the PPP MTU, this setting can be overridden, the upper limit is the full MTU. when there is a large transfer of data between peers, the bundle manager distributes a 1500 byte fragment on each available link in a round-robin fashion, or numerous small transfers are interleaved with fewer large transfers. fragment size is tuned for different circumstances to achieve the best aggregate throughput.”*

(FINAL Office Action, pages 4-5). Based on *McCullough*'s teaching that the maximum fragment size allowed to be transmitted by a machine can be set or tuned to correspond to the smallest MTU of all networks likely to be encountered between the machine and a final destination (which will achieve the best throughput) and that that packet fragment size is able to be tuned, the Office Action reasons that *McCullough* teaches that the “remaining portion” corresponds to a majority of the payload of the incoming packet. Applicants respectfully disagree.

In claim 1, the “remaining portion” refers to a portion of the payload of the incoming packet. After transmitting the first outgoing packet, the gateway device transmits the second outgoing packet being formed according to a remaining portion of the payload stored in the storage units. The payload of the incoming packet is divided across the two outgoing packets defined in claim 1. One of the defining features of the claimed embodiments it that the majority of the payload of the incoming packet corresponds to the second outgoing packet.

Applicants respectfully submit that the rejections should be overturned as the rejections set forth in the Office Action constitute error. The rejections in Office Actions must follow the requirements of the MPEP. Applicants respectfully note that MPEP 2144.04 (“C. Rearrangement of Parts”) requires that “[t]he mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device.” (emphasis added; *citing Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984)). Here, the Examiner's assertion that it would have been obvious to combine the teachings of *McCullough* and *Kitada* because it is advantageous to send a small packet first appears to be based on Applicants' own disclosure.

The background section of the present application specifically addresses various perceived shortcomings of IP packet fragmentation as performed according to prior art approaches. Generally speaking, conventional approaches are directed to transmitting a larger portion in the first outgoing packet rather than the second outgoing packet so that the payload stored in the buffer will be minimized. Applicants submit that *McCullough* fails to disclose or suggest that the remaining portion corresponds to a majority of the payload of the incoming packet. *McCullough*, in fact, explicitly states that “[I]standard IP fragmentation is used in the present invention.” (*McCullough*, paragraphs [0035], [0058]). In this regard, *McCullough* does not disclose or suggest that the majority of the payload of the incoming packet corresponds to the second outgoing packet. Applicants submit that the fact that the claimed embodiments specify that the second packet corresponds to a majority of the packet payload is not an arbitrary claim requirement. Indeed, this very feature was one of the central features of the claimed embodiments in distinguishing the admitted prior art (see, e.g., FIGS. 2 and 3 of the present application in comparison to the inventive embodiment of FIGS. 4 and 5). A significant benefit of this feature is better utilization of buffers that are internal to the gateway units 112 and 114. By intentionally structuring the payload of the second

outgoing packet to be larger than the payload of the first outgoing packet, more efficient utilization of the buffers in the gateway units. As such, it is clear that the relative payload size of the outgoing packets is not arbitrary, and therefore not merely a matter of design choice. For at least this reason, the rejection of independent claim 1 should be withdrawn.

As a separate and independent basis for the patentability of claim 1, Applicants submit that the combination of *Kitada*, *AAPA*, and *McCullough* is improper and therefore does not render the claim obvious. On pages 5-6, the FINAL Office Action mailed January 15, 2010 combined these references to reject the claims based on the alleged motivation that “*[i]t would have been obvious to a person having ordinary skill in the art . . . to combine the teachings of the McCullough with Kitada, thus modifying Kitada to have a small transfer followed by a large transfer, to avoid network congestion and adaptively achieve the best aggregate throughput. E.g., when the network is congested - it is advantages [sic] to send a small size packet first, this will keep the connection alive and have the least impact on bandwidth resources. Another having ordinary skill in the art that these portions are either equal or one is larger than the other one. Hence when transmitting these portions either the packets are of equal size or one packet is larger than the other packet.*” (Emphasis added). Applicants respectfully submits that this rationale is both incomplete and improper in view of the established standards for rejections under 35 U.S.C. § 103. Here, the alleged rationale for combining the references is merely a conclusory statement that embodies clear and improper hindsight rationale. Applicants respectfully submit that such a conclusion of obviousness and modification appears to come from Applicants’ own disclosure, which is *per se* improper. For at least these additional reasons, Applicants submit that the rejection of claim 1 is improper and should be withdrawn.

Claim 20 recites the feature “wherein the size of the second outgoing packet is larger than that of the first outgoing packet.” The Office Action again relies on *McCullough* to allegedly disclose this feature. Based on *McCullough*’s teaching that the maximum fragment size allowed to be transmitted by a machine can be set or tuned to

correspond to the smallest MTU of all networks likely to be encountered between the machine and a final destination (which will achieve the best throughput) and that that packet fragment size is able to be tuned, the Office Action reasons that *McCullough* teaches that this feature. Again, with reference to MPEP 2144.04, “[t]he mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device.” For at least these reasons, Applicants submit that the rejection of claim 20 is improper and should be withdrawn. For at least the same reasons, all claim rejections should be withdrawn. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). In view of the foregoing, favorable reconsideration and allowance or the re-opening of prosecution on the merits of the present application is hereby courteously requested.

A credit card authorization is provided herewith to cover the fee associated with the accompanying petition for extension of time and the accompanying Notice of Appeal. No additional fee is believed to be due in connection with this submission. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

/Daniel R. McClure/

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